



NEPSI PROPAGATION
Preventing Respirable Crystalline Silica Dust at Work at National Level
Dissemination of NEPSI tools in Belgium
19 March 2026, Hotel NHOW, Brussels
Report of the meeting

The attendance list and agenda of the meeting are enclosed. The presentations were shared with the participants.

Welcome to the seminar by the Chairs, Florence Lumen and Sylvain Lefebvre

The two NEPSI presidents welcomed the 50 participants to the seminar.

Florence Lumen, Health and Safety Director at IMA-Europe, speaking on behalf of the employers, opened the seminar. For 20 years, NEPSI has brought together social partners from 17 different sectors who work together to promote the health and safety of workers in their sectors. Over the years, a whole range of tools to protect workers' health has been developed, based on good practices in prevention and protective measures. We are now engaged in programmes to disseminate these tools and best practices; we also discuss national realities through various seminars in many countries where we cooperate with national authorities and institutes, and we strive to target small businesses to raise awareness of crystalline silica. We are very pleased to be here in Belgium today to discuss this very important issue together.

Sylvain Lefebvre represents the trade unions united under industriALL Europe. NEPSI has been helping to protect workers for nearly 20 years. The agreement provides invaluable monitoring of protective measures. It helps to ensure the implementation of legislation on the ground.

Welcome by European social partners, industriAll Europe, Sophie Grenade

Sophie Grenade, spokesperson for industriALL Europe, highlights the many sectors represented by this major European trade union. The challenges currently facing European industry are enormous – for example, policies on access to raw materials – but workers' health remains the top priority, and NEPSI is an important initiative in this regard.

Welcome by the national authorities and by the national social partners

Mr Gunther Kathagen (SPF Emploi – Federal Public Service Employment, Labour and Social Dialogue) explains the legal framework governing well-being at work in Belgium. He notes that there has been an increase in cases of silicosis due to composite materials. He emphasises the importance of exposure measurements in identifying risks and recommends sharing these measurements. It is important not to overlook small businesses and to disseminate best practices to them.



Mr Sébastien Dupanloup, Federal Secretary at FGYB Centrale Générale, shares his experience at the FGTB headquarters. Health is priceless; we must prevent scenarios such as those we experienced with asbestos. Prevention measures cost less than remedy. He cites the example of an agreement reached in the cement sector to ensure that employees receive an annual health check-up 20 years after leaving the sector. This proves that such agreements can be reached.

Mr Kris De Meester (FEB/VBO), representing Belgian employers and expert in health and safety at European level, explains that when discussing occupational health and safety, the focus tends to be on legislation and enforcement. However, it is important to adopt an integrated approach. We should first consider how legislation will be implemented before designing it. NEPSI is a valuable tool for helping to implement legislation for the protection of workers on the ground and is an excellent, successful example of how it can complement legislation. The main concerns regarding exposure to silica are in the construction sector, as these are very widespread situations and are difficult to monitor. We must work through dialogue. We must consider best practices right from the drafting stage of a law and tackle this challenge together to protect as many employees as possible.

Evolution of NEPSI, Sylvain Lefebvre & Florence Lumen

Mrs Lumen and Mr Lefebvre presented the evolution of NEPSI.

Established in 2006, NEPSI represents the first multisectoral European Social Dialogue Agreement for the safe handling and use of crystalline silica and related products.

It brings together 19 industry sectors (mining, ceramics, glass, construction materials, foundry, etc.) and trade unions under *industriALL Europe*.

The initiative is continuously supported by the European Commission and aims to reduce worker exposure to RCS through education, guidance, and monitoring.

In 2018, the European Directive 2017/2398/CE established an EU occupational exposure limit for RCS. NEPSI's good practice framework was recognized as essential to its implementation.

From 2019 to 2021, a series of actions and new tools were developed:

- Updated the Good Practice Guide.
- Created SME-specific toolkits and training for new workers.
- Developed standardized measurement methodologies.
- Translated all materials into EU languages.

NEPSI PROPAGATION project, Sylvain Lefebvre & Florence Lumen

- Presentation of the project's objectives
- Presentation of NEPSI tools, including training tools for new workers – e-learning platform.



From 2022 to 2024, the NEPSI in ACTION project took place which extended NEPSI outreach with national seminars, conferences, and added new e-learning modules. Those initiatives strengthened the visibility, implementation, and improved the reporting.

Now we have started NEPSI PROPAGATION Project which will run till 2028 and will

- Expand activities to five new countries (BE, NL, IE, PT, BG).
- Promote innovation, organize awareness campaigns, and celebrate *20 years of NEPSI* on 14 October 2026.

Then they presented in detail the numerous NEPSI Tools and Resources:

- **Good Practice Guide** guide.nepsi.eu: Practical instructions and sector-specific “Task Guidance Sheets” (over 70) detailing control measures to limit exposure.
- **SME Toolkit** toolkit.nepsi.eu: Simplified implementation guidance in four steps — *assessment, control, monitoring, training*.
- **Training and E-learning Platform** training.nepsi.eu:
 - 13 downloadable training packs (e.g. ventilation, cleaning, PPE, wet processes).
 - Interactive, voluntary online learning modules and quizzes.
 - Certificate of completion upon finishing.
- **Measurement Protocol** nepsi.eu: A harmonized methodology (developed with Utrecht University) for sampling, analyzing, and statistically evaluating worker exposure to RCS.

Mr Lefebvre underlined the outcome and impact of the Agreement:

- NEPSI covers more than 380,000 employees across 10,000+ sites in the EU.
- 96% of exposed workers are covered by risk assessments, 84.5% by exposure monitoring, and 41% receive specialized health surveillance for silicosis prevention.

The indicators (exposure surveillance, risk evaluation, training) show continuous improvement since 2008.

NEPSI demonstrates the effectiveness of social dialogue in workplace health protection. It provides practical, widely adopted tools for risk prevention and compliance, enhancing workers health and safety within Europe.

Experience/perspectives from companies on good practices

Sibelco: new dust detection technologies, An Buttiens

This presentation by An Buttiens, VP Health & Safety at Sibelco, showcases the company's innovative dust monitoring programme to protect workers from crystalline silica exposure.

Sibelco has developed a real-time dust detection program (“GET TO ZERO”) to overcome the limitations of traditional monitoring methods, which are often slow and lack precision. Using technologies such as Helmet-CAM, which combines video with instant dust measurements, the company enables immediate action when abnormal levels are detected.



This approach helps identify exposure sources, analyze high-risk activities, map dust-prone areas, and verify the effectiveness of control equipment.

Beyond the technology, the program has a strong cultural impact by increasing worker awareness, improving behaviors, and shifting ownership of dust management to operations teams. Sibelco is further expanding this approach through fixed sensors integrated into industrial systems and low-cost solutions. Together, these initiatives enable proactive, fast, and effective dust management, improving both worker safety and operational performance.

Sibelco's program succeeds because it combines **real-time technology with cultural change**. By making dust exposure visible and actionable, the company enables faster decisions, safer behaviors, and continuous improvement — achieving both **health protection and operational efficiency**.

Sibelco's comprehensive real-time dust detection program demonstrates how innovative technology combined with strong organizational commitment can transform workplace dust management. By making "invisible" dust exposure "visible" through real-time monitoring, video correlation, and immediate feedback systems, the company has created a culture of dust awareness that empowers workers, improves processes, and achieves measurable exposure reductions while maintaining operational efficiency. The program's success lies in its multi-layered approach: from high-tech helmet cameras for detailed analysis to low-cost personal monitors for widespread awareness, all supported by strong leadership commitment and worker engagement.

Initiatives in the quarrying sector (Carmeuse) from a trade union perspective, Laurent Wattier, FGTB Centrale Générale

Carmeuse is an international producer of lime and limestone. Between 2013 and 2018, the company conducted an extensive exposure measurement campaign across sixteen European plants located in Belgium, Hungary, the Netherlands, the Czech Republic, Romania, and Slovakia. These campaigns covered quarries, stone processing lines, and lime or dolomite production units, analyzing a total of eighty-six functional positions in maintenance, quarry and stone line production, and lime production including laboratory and loading operations.

A new campaign is now ongoing and involves fourteen plants instead of sixteen, corresponding to seventy-one functions from the original eighty-six. Some of the most exposed positions have disappeared due to the closure of older facilities, particularly in the Czech Republic, and many job descriptions have evolved significantly following the company's investments and organizational adjustments.

To address this new reality, Carmeuse has introduced a structured and standardized methodology for its campaigns. The first step was to confirm with geologists that no major changes had occurred in the quality of the stones used.



The second step focused on updating job descriptions at each site, comparing functions, and identifying roles most at risk of exposure. The third step ensured consistency and quality of measurements: all sites now use the same measuring device, the CIP 10, and analyses are handled by a single accredited laboratory in France (ITGA). Three calibrated kits have been prepared and distributed across Belgium, Slovakia, and Romania. The fourth step established a clear organizational framework in which a European specialist defines the methods, develops training materials, and manages both reporting and laboratory coordination. Local safety managers are responsible for supporting the organization of sampling activities and follow-up, while plant managers oversee the on-site execution of measurement campaigns.

Training and knowledge retention are key pillars of this new approach. A test campaign in Romania validated the method, and local safety managers have been trained directly by the European specialist. To maintain and transfer this expertise, Carmeuse is also developing an e-learning program that explains what is being measured, why it matters, and how to carry out each step correctly. This digital training tool will ensure the long-term sustainability of the program and continuous awareness for all employees involved now and in the future.

Through this renewed and harmonized European workers exposure measurement program, Carmeuse aims to ensure high data quality, consistency across countries, and an ongoing commitment to workplace safety, continuous improvement, and environmental responsibility.

Good practices in Wienerberger, Cornelia Bogaerts, Health and Safety Country Manager, replaced by Mrs Sigrid Graul (Belgische Baksteenfederatie)

Wienerberger Belgium (WBBE) presents a comprehensive approach to managing respirable crystalline silica (RCS) exposure in its brick and ceramics operations, based on the TOM principle combining technical, organizational, and human measures within the traditional risk hierarchy of prevention. The company prioritizes engineering controls such as advanced dust extraction systems, local ventilation, and innovative equipment modifications that significantly reduce dust levels, alongside water-based suppression techniques and strict compartmentalization of dusty processes through enclosed areas and pressurized cabins. These technical measures are supported by strong organizational practices, including regular external monitoring, real-time dust measurement with personal devices, and strict equipment policies such as replacing manual cleaning with HEPA-filtered vacuum systems.

At the same time, WBBE invests heavily in awareness and safety leadership through training programs, onboarding processes, and active management engagement to reinforce safe behaviors. Personal protective equipment remains a critical layer, with mandatory use of high-grade respiratory protection, face-fit testing, and adapted solutions for specific worker needs, combined with strict hygiene and work practices to prevent dust exposure and spread. Additional precautions are taken for vulnerable groups, notably restricting student and trainee access unless exposure levels are extremely low.



This strategy has led to significant reductions in dust exposure, demonstrates strong regulatory compliance, and fosters a safety culture that integrates worker health with operational performance

Questions and answers on the presentations:

It was reported that the implementation of dedicated “no dust teams” in SIBELCO had an immediate and positive impact on exposure levels. It was also highlighted that no distinction is made between employees and subcontractors in this context.

Practical challenges related to the use of personal protective equipment (PPE) were acknowledged by CARMEUSE representative, emphasizing that on-site realities need to be better considered. While the use of masks remains essential, it was stressed that collective protective measures are necessary and that efforts should be made to reduce dust at the source as much as possible.

The issue of facial hair in relation to mask effectiveness was also raised. It was indicated that where masks cannot provide adequate protection due to a beard, alternative solutions such as full-face masks with a fresh air supply system should be considered.

Afternoon session:

National obligations/legislations – Including OELs, RCS exposure monitoring, guidance, protocol and methodology used, equipment, standards and health surveillance

Mr Gunter Kathagen (Federal Public Service Employment, Labour and Social Dialogue)

In Belgium, exposure to respirable crystalline silica is strictly regulated by the Code of Well-being at Work (Book VI). The use of dry sandblasting methods with materials containing more than 1% free silica is prohibited. The occupational exposure limit is set at 0.05 mg/m³ for quartz cristobalite and tridymite (respirable fraction). Employers must assess the risks, implement technical prevention measures (ventilation, wet working methods), ensure medical surveillance of exposed workers, and keep exposure data for 40 years. Mr Kathagen recalls that substitution is the first measure to try to implement whenever possible. He mentions that an occupational exposure limit is not always the same as the health-based limit and that there may be a residual health risk. The exposure limit is a warning threshold that must not be exceeded. If it is exceeded, immediate action must be taken. The combined effects of different exposures must also be taken into account. He particularly emphasises the importance of substituting artificial stones. He recommends the use of new protective masks and providing workers with more comfortable alternatives. He is interested in an exchange of data on exposure to crystalline silica. Belgium is working on guidelines for businesses following the problems observed with artificial stones. The aim is to propose a methodology and a reliable decision tree for carrying out site visits and to provide staff with proper training.



Ir. K. Eerdeken and Dr. Nele Van Loon (Co-Prev, External Services for Prevention and Protection at Work)

Co-Prev represents Belgium's federation of external prevention services, working to standardize risk assessment across all services. The goal is to ensure that every worker facing real health risks receives appropriate health surveillance, regardless of company or sector.

This presentation, delivered by Ir. K. Eerdeken and Dr. Nele Van Loon from Co-Prev, outlines a standardized and science-based approach to assessing risks related to respirable crystalline silica (quartz) and organizing appropriate health surveillance for exposed workers across Belgium. At its core is a decision tree methodology that evaluates exposure using five scored parameters linked to work activities, materials, and conditions, producing a final risk score that classifies exposure levels. This tool, validated against real measurement data, achieves about 93% accuracy and tends to be conservative, ensuring that workers at risk are reliably identified.

Based on this risk assignment, only workers with a demonstrated health risk are included in a structured health surveillance program aimed at preventing diseases such as silicosis, COPD, and lung cancer. The program includes baseline medical assessments—such as occupational history, respiratory questionnaires, lung function tests, and chest X-rays—followed by periodic monitoring to detect early health effects and evaluate the effectiveness of preventive measures. The framework also defines clear processes for reporting results to workers and employers, assessing fitness for work, and referring workers to specialists when necessary.

Overall, the system ensures consistent, harmonized protection through a combination of validated risk assessment, targeted medical follow-up, and multidisciplinary collaboration.

Roundtable discussion on the interactions between legislation and best practices in prevention, with a focus on the needs of SMEs and microenterprises and the challenges they face.

The roundtable discussion was moderated by Florence Lumen, with all seminar speakers invited to the stage for a panel exchange.

The discussion opened with a question on whether compliance with new national occupational exposure limits (OELs) is more challenging for smaller companies. It was observed that non-compliance situations tend to occur more frequently in smaller enterprises, where awareness-raising actions are particularly important. The importance of using respiratory protective equipment as a last line of defence was highlighted, along with the key role of occupational physicians. Specific attention was drawn to workers handling artificial stone, often in small workshops, where exposure risks can be significant, and where the use of alternative materials should be explored.

On the role of trade unions in raising awareness of silica-related risks, it was noted that engagement is generally easier with larger companies. However, the experience and knowledge developed in these big organisations should be transferred to smaller enterprises.



Regarding substitution, it was acknowledged as a primary preventive measure, but its application is limited due to the widespread presence of crystalline silica in naturally occurring materials used in construction. Therefore, good practices and preventive measures remain essential. The importance of training trade union representatives to raise awareness of silica-related health risks at company level was also emphasized.

The role of prevention institutes in supporting awareness-raising, particularly among small and medium-sized enterprises (SMEs), was discussed. It was noted that workplace visits provide opportunities to address these issues, including offering tailored guidance on the selection of appropriate personal protective equipment. In addition, information is disseminated along the value chain through safety data sheets provided by raw material suppliers.

The integration of dust prevention measures into company investment plans was also addressed. It was highlighted that such measures are most effective when incorporated at the design stage of installations and processes. In this context, practical guidance materials, such as the NEPSI task sheets on dust extraction and ventilation systems, were identified as useful tools.

Finally, the communication of dust exposure measurement results to workers was discussed. It was explained that in SIBELCO regular exposure monitoring campaigns are conducted for groups of workers with similar exposure profiles. The results are shared and discussed within workplace health and safety committees, and also communicated during dedicated safety events, providing opportunities for direct exchange between workers and health and safety professionals

Discussion with the audience

It was observed that workplace inspections in Belgium are often announced in advance, which may influence the outcomes and reduce their overall effectiveness.

The presentation of the risk analysis tool was considered very valuable. However, it was highlighted that **continuous monitoring** of working conditions, hazards, and risks can be more effective and less costly over time, even though risk assessment remains a fundamental element of prevention.

It was also noted that the construction sector, despite being associated with some of the highest exposure levels, was not represented among the participants. Regret was expressed regarding the absence of relevant construction sectoral organisations, although it was acknowledged that they did awareness campaigns on silica in the past. Previous initiatives involving both employer and trade union representatives from the construction sector were recalled on the subject of artificial stones, and there was agreement on the need to reinvigorate dialogue with the sectoral social partners to explore potential joint projects in the future.

Finally, it was suggested that cooperation could also be extended to professional associations of architects, as they are involved at the design stage of construction projects and could contribute to identifying alternative materials with lower crystalline silica content. These stakeholders were recognised as important actors to engage moving forward.



Conclusion by NEPSI chairs

Mr Lefebvre concluded the seminar by stating that it has clearly demonstrated the strength and value of bringing people together. With such strong attendance and representation from industry, trade unions, public authorities, and prevention institutes across Belgium, this event stands as a concrete example of effective and constructive social dialogue in action. NEPSI remains unique as the only multisectoral platform dedicated to exchange on silica and the protection of workers' health. That role is more important than ever, and it is encouraging to see such broad engagement from all stakeholders. He shared his hope that participants found the discussions insightful and worthwhile, and that they will continue exploring this work by visiting the NEPSI website, making use of its many tools, and sharing them within their own networks.

Mrs Lumen warmly thanked all the speakers for their valuable contributions. Thank you to all participants for the rich and engaging discussions, and a special thank you to the interpreters who made this exchange possible. We look forward to staying in touch and continuing this important work together.



NEPSI PROPAGATION

**The European social dialogue comes to Belgium!
Preventing Respirable Crystalline Silica Dust at Work at National
Level**

**Dissemination of NEPSI new tools
Translation in NL, FR, EN
19 March 2026, Hotel NHOW, Brussels
Programme**

09:30	Welcome coffee
10:00	Welcome to the seminar, by the Chairs, Florence Lumen and Sylvain Lefebvre, Welcome by European social partners, industriAll Europe, Sophie Grenade
10:10	Welcome by the national authorities and by the national social partners <ul style="list-style-type: none"> • Gunter Kathagen (Federal Public Service Employment, Labour and Social Dialogue) • Kris de Meester (Federation of Belgian Enterprises VBO/FEB) • Sébastien Dupanloup (Federal Secretary General Union FGTB)
10:30	Introduction to NEPSI and its evolution (video) NEPSI PROPAGATION project, Sylvain Lefebvre & Florence Lumen <ul style="list-style-type: none"> • Presentation of the project objectives • Presentation of NEPSI tools • Training tools for new workers – e-learning platform
11:15	Coffee Break

11h:30	<p>Experience/perspectives from companies on good practices</p> <ul style="list-style-type: none"> • Sibelco: new dust detection technologies, An Buttiens • Initiatives in the quarrying sector from a trade union perspective • Good practices in Wienerberger, Cornelia Bogaerts, Health and Safety <p>Country Manager</p>
12:30	Lunch break
14:00	<p>National obligations/legislations – Including OELs, RCS exposure monitoring, guidance, protocol and methodology used, equipment, standards and health surveillance</p> <ul style="list-style-type: none"> • Gunter Kathagen (Federal Public Service Employment, Labour and Social Dialogue) • Karine Eerdeken (Co-Prev, External Services for Prevention and Protection at Work)
15:00	<p>Roundtable discussion on the interactions between legislation and best practices in prevention, with a focus on the needs of SMEs and microenterprises and the challenges they face.</p>
16:00	Conclusion by the Chairs



NEPSI Seminar

**Prevention of occupational exposure to respirable crystalline silica dust
in Belgium**

Roll-out of the new NEPSI tools

***19 March 2026,
NHOW HOTEL, BRUSSELS***

ATTENDANCE LIST

First Name	Last Name	Organisation
Admir	Saric	IMA-Europe
Alex	Lindelauf	Kerkstoel
An Leona I	Buttiens	SIBELCO
Anam	Iqbal	Cement Europe
Arlette	Hoetink	Vandersanden
Charles	Denes	Compagnie des Ciments Belges S.A.
Christian	Van Leeuw	IDEWE
Clara	Neches	IMA-Europe
Cornelia	Bogaerts	Wienerberger
Dimitri	De Coninck	Laboratory of occupational hygiene
Elke	De Vits	FOD Werk SPF Emploi
Filip	Van Mulders	Omco Metals
Florence	Lumen	IMA-Europe
Fonny	Swerts	Democo
Frank	Gerits	Nelissen Steenfabrieken - Idewe
François	Delfosse	Heidelberg Materials Béné
Frédéric	Lucchetta	FGTB
Gilles	Sonneville	Compagnie des Ciments Belges S.A.
Gunter	Kathagen	FOD Werk SPF Emploi
Henri	Ndabahagamye	Compagnie des Ciments Belges S.A.
Jared	Houben	Vandersanden Steenfabrieken NV
Jean-Claude	Calomme	ACT OF SAFETY
Jochem	Budding	TUBOBEL AQUA NV
Joeri	Luts	Fedris
Jorge	Aladro	ANCADE



Karine	Eerdekens	Mensura EDPB
Kris	De Meester	VBO/FEB
Kristin	Aerts	Fédération Belge de la Brique
Kurt	Degeest	Vanderzenden Steenfabrieken NV
Laurent	Wattier	FGTB
Louis-Charles	Baudhuin	Tradecowall SC
Luc	Swinnen	ABVV - AC - Antwerpen Kempen
Magdalena	Herbik	BIBM - Federation of the European Precast Concrete Industry
Michaël	Demont	FOD Werk SPF Emploi
Nele	Van Loon	Mensura EDPB
Olivia	Sala	Febelcem
Peter	Gielen	Algemene centrale limburg
Philippe	Vigneron	FGTB
Sacha	Druart	Heidelberg Materials Benelux
Sébastien	Dupanloup	FGTB
Sigrid	Grauls	Belgische Baksteenfederatie
Sylvain	Lefebvre	industriAll Europe
Sofia Noelle	Gonzalez	Euromines
Sophie	Grenade	industriAll Europe
Soumaya	El Karroumi	FEBE
Steve	Maes	ABVV-FGTB
Stijn	Pauwels	Agoria
Thierry	Le Men	Carmeuse
Thierry	Vanmol	Fediex
Tinne	Van Hees	CRH (SCB - VV/M)
Tom	Vermeersch	FOD Werk SPF Emploi
Valentin	Pilleux	Compagnie des Ciments Belges S.A.
Vincent	Lefebvre	Heidelberg Materials Benelux
Wim	Van Roy	VVM Cement
Xavier	Feys	Compagnie des Ciments Belges S.A.